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EXAMINER

SINKANTARAKORN, PAWARIS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 8, 15, 33, 42, 51, and 56 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments filed 1/10/2008, regarding claims 22 and 28, have been fully considered but they are not persuasive.

On pages 2-3 of the Remarks, the Applicant submits that the interface translations/conversions are done at a single interface location between the two networks, which is not taught or suggested by Bertacchi. The Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., conversions) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claims 22 and 28 merely recites the first and second networks using disparate signaling protocols, which is taught by Bertacchi (see column 6 line 13 – column 7 line 9 and column 10 lines 19-35, domestic and foreign Gateway Mobile Switching Center (GMSC)). Claims 22 and 28 recite the steps of: receiving a telephone transaction initiation or response message; querying the originator's home registration database; and forwarding registration status information, which are all done at the domestic GMSC.

Thus, in view of the above reasoning, the Examiner believes the rejection should be sustained.

3. Claims 1-62 are currently pending in the application.

Claim Rejections - 35 USC § 112

4. Claims 33-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 33 line 11, the recitation "the second virtual point code" has no antecedent basis.

Regarding claim 33 line 15, the recitation "the originator" has no antecedent basis.

Claims 34-41 are then rejected because they depend on claim 33.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 22-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Bertacchi (US 6,625,461).

Regarding claims 22 and 28, Bertacchi discloses a method, comprising the steps of:

receiving a telephone transaction initiation or response message that originated with a telephone set or node currently located in a first network, the message bearing an originator's registration number identifying the address of the initiating node in the first network, the first and second networks using disparate signaling protocols (see column 6 line 13 – column 7 line 9 and column 10 lines 19-35, a domestic VMSC or GMSC receives an originating MSCID from a first mobile station, the domestic VMSC or GMSC then request current location information of a second mobile station from a foreign Home Location Register (HLR), wherein the domestic and foreign VMSCs or GMSCs might not recognize the received (originating or terminating) MSCIDs, which implies that the first and second mobile stations use different message protocols);

querying the originator's home registration database using the network protocol of the second network to determine the registration status of the originator (see column 6 lines 28-37 and column 10 lines 19-35, the domestic VMSC or GMSC contacts, via an international signaling connection, a foreign HLR; the domestic GMSC converts the originating message containing MIN to a location request message containing MSCID and sends the location request message to the foreign HLR to obtain an MSCID of the second mobile station);

forwarding registration status information to the first network in the network protocol of the first network (see column 6 line 60 – column 7 line 9 and column 10 line 58 – column 11 line 12, the location response message is then sent to the domestic GMSC, the domestic GMSC then forwards a response to the first mobile station to inform the first mobile station of the completion of the connection setup);

regarding claims 23 and 29, further comprising the step of converting a format of the initiation message into a format utilized by the first network (see column 6 lines 28-37 and column 10 lines 19-35);

regarding claims 24-30, the step of converting the format of the message is performed by matching values of the format of the message with values of the format utilized by the first/second network (see column 6 line 60 - column 7 line 9);

regarding claims 25 and 31, further comprising the step of converting an address of the telephone set from a format utilized by the second network into a format utilized by the first network (see column 6 lines 28-37 and column 10 lines 19-35);

regarding claims 26 and 32, further comprising the step of generating a destination point code (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

regarding claim 27, the step of generating a destination point code further comprises inserting a virtual point code (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC).

Claim Rejections - 35 USC § 103

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-21, 33-51, 53-56, and 58-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertacchi in view of Gallagher et al. (newly cited US 5,933,784).

Regarding claims 1, 8, and 15, Bertacchi discloses a method, comprising the steps of:

receiving an originating telephone transaction message from an originator on a first network, the originating message having a first network messaging protocol and requesting subscriber information from a home registration database located on a second network, the first and second networks using disparate messaging protocols (see column 6 line 13 – column 7 line 9 and column 10 lines 19-35, a domestic VMSC or GMSC receives an originating MSCID from a first mobile station, the domestic VMSC or GMSC then request current location information of a second mobile station from a foreign Home Location Register (HLR), wherein the domestic and foreign VMSCs or GMSCs might not recognize the received (originating or terminating) MSCIDs, which implies that the first and second mobile stations use different message protocols);

converting the first network messaging protocol of the originating message into a second network messaging protocol suitable for the second network (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network);

forwarding the converted originating message to the home registration database of the second network (see column 6 lines 28-37 and column 10 lines 19-35, the domestic VMSC or GMSC contacts, via an international signaling connection, a foreign HLR; the domestic GMSC converts the originating message containing MIN to a location request message containing MSCID and sends the location request message to the foreign HLR.);

receiving a responding message from the second network, the responding message having the second network messaging protocol (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

converting the second network messaging protocol of the responding message into the first network messaging protocol (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network; in this case, the foreign cellular network is the originating network because the originating network is foreign to the destination network); and

forwarding the converted responding message to the originator (see column 6 line 60 – column 7 line 9 and column 10 line 58 – column 11 line 12, the location response message is then sent to the domestic GMSC, the domestic GMSC then forwards a response to the first mobile station to inform the first mobile station of the completion of the connection setup).

Bertacchi does not disclose that the method is performed at a single interface location between the two networks. However, Gallagher et al. from the same or similar fields of endeavor disclose a method for performing conversions at a single interface location between two networks (see Figures 2-3, abstract, column 6 lines 36-64, and column 7 lines 12-28, Signaling Gateway 202 converting between a first network to a second network, and vice versa).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a method is performed at a single interface location between the two networks as taught by Gallagher et al. into the method of Bertacchi.

The motivation for implementing a method is performed at a single interface location between the two networks is that the signaling gateway is located outside of both the two systems and, therefore, can be utilized by many systems as opposed to only the system in which it is located in (see column 5 lines 32-36).

regarding claims 2, 9, and 16, the step of converting the first network messaging protocol further comprises a step of deriving a destination point code in the second network (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

regarding claims 3, 10, and 17, the step of converting the second network messaging protocol further comprises a step of deriving a destination point code in the first network (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

regarding claims 4, 5, 11, 12, 18, and 19, the step of converting the first/second network messaging protocol further comprises a step of converting a format of an originator's address (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network);

regarding claims 6, 7, 13, 14, 20, and 21, the step of converting the first/second network messaging protocol further comprises a step of converting a format

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of a destination address ((see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received physical address into a physical address compatible with the signaling system used by the foreign cellular network).

Regarding claims 33 and 42, Bertacchi discloses a method, comprising the steps of:

receiving an originating telephone transaction message from a first network, the originating message having a first network messaging protocol and having a first virtual point code as its destination point code (see column 6 line 13 – column 7 line 9 and column 10 lines 19-35, a domestic VMSC or GMSC receives an originating MSCID and physical address from a first mobile station, wherein the originating MSCID and physical address is for the domestic VMSC or GMSC to request current location information of a second mobile station in a foreign network);

converting the first network messaging protocol of the originating message into a second network messaging protocol suitable for the second network (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network);

forwarding the converted originating message to a home registration database of the second network (see column 6 lines 28-37 and column 10 lines 19-35, the domestic VMSC or GMSC contacts, via an international signaling connection, a foreign HLR; the domestic GMSC converts the originating message containing MIN to a location request message containing MSCID and sends the location request message to the foreign HLR.);

receiving a responding message from the second network, the responding message having the second network messaging protocol and having a second virtual point code as its destination point code (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC; the domestic GMSC address corresponds to the second virtual point code);

converting the second network messaging protocol of the responding message into the first network messaging protocol (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network; in this case, the foreign cellular network is the originating network because the originating network is foreign to the destination network); and

forwarding the converted responding message to an originator on the first network (see column 6 line 60 – column 7 line 9 and column 10 line 58 – column 11 line 12, the location response message is then sent to the domestic GMSC, the domestic GMSC then forwards a response to the first mobile station to inform the first mobile station of the completion of the connection setup).

Bertacchi does not disclose that the method is performed at a single interface location between the two networks. However, Gallagher et al. from the same or similar fields of endeavor disclose a method for performing conversions at a single interface location between two networks (see Figures 2-3, abstract, column 6 lines 36-64, and

column 7 lines 12-28, Signaling Gateway 202 converting between a first network to a second network, and vice versa).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a method is performed at a single interface location between the two networks as taught by Gallagher et al. into the method of Bertacchi.

The motivation for implementing a method is performed at a single interface location between the two networks is that the signaling gateway is located outside of both the two systems and, therefore, can be utilized by many systems as opposed to only the system in which it is located in (see column 5 lines 32-36).

regarding claims 34 and 43, the step of forwarding the converted originating message to the home registration database further comprises a step of replacing the first virtual point code with a destination code identifying a node on the second network (see column 6 line 60 – column 7 line 9);

regarding claims 35 and 44, the step of forwarding the converted responding message to the originator further comprises a step of replacing the second virtual point code with a destination code identifying a node on the first network (see column 6 line 60 – column 7 line 9);

regarding claims 36 and 45, the step of converting the first network messaging protocol further comprises a step of deriving a destination point code in the second network (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

regarding claims 37 and 46, the step of converting the second network messaging protocol further comprises a step of deriving a destination point code in the first network (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

regarding claims 38, 39, 47, and 48, the step of converting the first/second network messaging protocol further comprises a step of converting a format of an originator's address (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network);

regarding claims 40, 41, 49, and 50, the step of converting the first network messaging protocol further comprises a step of converting a format of a destination address (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received physical address into a physical address compatible with the signaling system used by the foreign cellular network).

Regarding claims 51 and 56, Bertacchi discloses a method, comprising the steps of:

receiving a first telephonic transaction message from a destination on a first network, the first telephone transaction message having a first network messaging protocol and being directed to a destination on a second network, the first and second networks using disparate messaging protocols (see column 6 line 13 – column 7 line 9 and column 10 lines 19-35, a domestic VMSC or GMSC receives an originating MSCID and physical address from a first mobile station, wherein the originating MSCID and

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physical address is for the domestic VMSC or GMSC to request current location information of a second mobile station in a foreign network, and the domestic and foreign VMSCs or GMSCs might not recognize the received (originating or terminating) MSCIDs, which implies that the first and second mobile stations use different message protocols);

converting the first network messaging protocol of the first telephone transaction message into a second network messaging protocol suitable for the second network (see column 6 line 60 – column 7 line 9, the domestic VMSC or GMSC translates the received MSCID into a MSCID compatible with the signaling system used by the foreign cellular network);

forwarding the converted first telephone transaction message to the second network (see column 6 lines 28-37 and column 10 lines 19-35, the domestic VMSC or GMSC contacts, via an international signaling connection, a foreign HLR; the domestic GMSC converts the originating message containing MIN to a location request message containing MSCID and sends the location request message to the foreign HLR);

wherein said step of converting the first network messaging protocol comprises a one-step table-driven conversion (see column 6 line 60 – column 7 line 9 and column 8 lines 55-60, the domestic VMSC or GMSC translates the received MSCID or physical address into a physical address compatible with the signaling system used by the foreign cellular network; the conversion can be accomplished using a table that contains a list of MSCIDs or other physical location information and a corresponding physical

address for the VMSC that is compatible with the signaling system used by the foreign cellular network).

Bertacchi does not disclose that the method is performed at a single interface location between the two networks. However, Gallagher et al. from the same or similar fields of endeavor disclose a method for performing conversions at a single interface location between two networks (see Figures 2-3, abstract, column 6 lines 36-64, and column 7 lines 12-28, Signaling Gateway 202 converting between a first network to a second network, and vice versa).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to implement a method is performed at a single interface location between the two networks as taught by Gallagher et al. into the method of Bertacchi.

The motivation for implementing a method is performed at a single interface location between the two networks is that the signaling gateway is located outside of both the two systems and, therefore, can be utilized by many systems as opposed to only the system in which it is located in (see column 5 lines 32-36).

Regarding claims 52 and 57, Bertacchi discloses a method/apparatus, wherein the step of converting the format of the message is performed by matching values of the format of the message with values of the format utilized by the first/second network (see column 6 line 60 - column 7 line 9);

regarding claims 53 and 58, further comprising the step of converting an address of said destination on said second network from a format utilized by said first

network into a format utilized by said second network (see column 6 lines 28-37 and column 10 lines 19-35);

regarding claims 54 and 59, further comprising a step of generating a destination point code (see column 10 line 58 – column 11 line 6, the foreign HLR sends a location response message containing MSCID of the VMSC to the domestic GMSC);

regarding claims 55 and 60, the step of generating the destination point code further comprises inserting a virtual point code (see column 10 line 58 – column 11 line 6);

regarding claim 61, further comprising a means for implementing origin-based routing (see column 10 line 58 – column 11 line 6);

regarding claim 62, further comprising an odd/even indicator (see column 10 line 58 – column 11 line 6, TLDN).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAO SINKANTARAKORN whose telephone number is (571)270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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